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CONSULTING CIVIL & GEOTECHNICAL ENGINEERS

Environmental Strategy

Delyn Mill Phase 2 Demolition.

Flint Mills,
Aber Rd, Coleshill, Flint, CH6 5EX.
Flintshire,
North Wales.

Kimberly Clark Ltd.

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Revision	Date	Reason
P0	25/04/13	Original, preliminary for planning purposes.
P1	01/11/13	Updated for Phase 2 Works, issued for comment.
1	04/11/13	Working issue.

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Contents

1 Introduction.

Delyn mill is part of a paper processing and manufacturing site located within the Aber Industrial Estate, Flint, North Wales.

The site dates back to the early 80's and comprises three mills (Flint, Delyn & Coleshill). Company restructuring has lead to the proposed closure of the Delyn mill which manufactures paper towels.

The closure will involve; plant shutdown and removal, service isolation, building superstructure dismantling and partial removal of substructure and the remainder appropriately finished and landscaped.

As part of the CDM responsibilities towards contractors and other persons involved in the dismantling and demolition processes of the Delyn Mill it is a requirement to identify any potential (or actual) contaminative risk that could cause harm to human or other environmental receptors. This document sets out the broad strategy for undertaking this assessment and finally delivering a safe and if necessary remediated site.

2 Proposed Scope of Demolition & Dismantling.

The Delyn Mill comprises a series of steel framed sheds with metal cladding and fibreglass insulation with concrete floor slabs and foundations. There is a partially glazed attached office building to the N end of the complex and waste paper storage and roll sheds (waste yard) attached to the S side via small link structures (refer to plan in appendix).

The office and waste yard sheds are to be retained and the main mill removed along with substructures and the area landscaped. The area immediately south of the office block will be provided with an additional car parking area.

Water, drainage and electrical services will be isolated from the complex retained only for the waste yard sheds and office block.

The exposed elevations to the waste shed from the former link structures will be re-clad and similarly the elevation to the office block exposed by the warehouse shed removal.

3 Preliminary Programme.

The demolition works are programmed to start in Nov 2013. Prior to this there are machine removal and service isolation works from June 2013.

Demolition will be undertaken in 3 phases;

Phase 1, Equipment Removal – to 3rd November 2013

Phase 2, Building Demolition - 4th November 2013 to 31st December 2013

Phase 3, Substructure Demolition, Site Remediation, Landcsaping – 1st January 2014 to 28th February 2014

Phase 4, Clarifier Demolition & Site Remediation – 1st March 2014 – 31st March 2014, Project Close (will be earlier if possible)

4 Current Environmental Status.

The Flint Mill site is relatively new and purpose built for paper & related products manufacture.

The processes involve conversion of paper / plastic wastes into domestic and commercial tissues, towels and wipes. Most processes are covered within warehouses / sheds (Mills). The site is provided with its own waste water treatment plant and water is recycled for fire and raw purposes.

The Delyn mill has the following main work areas:

waste paper storage,

paper machine – (pulping, pressing, drying & rolling),

converting - (cutting, folding, wrapping & cartoning),

product warehousing.

With the exception of the paper machine the other processes are predominantly dry and are contained on flat concrete floor slabs within the steel framed sheds and have a very low contaminative risk.

The paper machine area contains complex ground slabs laid to falls and drain channels, it contains deep pits and pump wells but all still principally within the steel framed sheds. All process waters and effluents are contained within the plant and effluent is pumped to the adjacent WWTW for recycling.

The processes are generally low risk from a contaminative aspect involving the pulping, drying and pressing of paper / plastics. However there are 'chemicals' introduced into the processes to assist the production and product. These are strictly controlled by COSHH, bunding and inventory systems and the mills themselves have managed drainage systems.

The Site overall external areas are a mix of natural and paved areas, lakes were developed with the twin aim of amenity and water re-use. All buildings & paved areas are drained towards the lakes to control runoff.

5 Historic Environmental Status.

The Site was until the late 1880's open agricultural land with the New Flint Colliery to the S corner served by a mineral railway, now the line of Aber Road.

The area had a nominal fall from the W to the E.

A stream was noted flowing ESE through the area which still remains on the Northerly extent of the Site boundary.

Spoil heaps were noted to the N perimeter of the colliery up until its abandonment in the early 1900's (recorded as disused in 1914). A sports ground and pavilion building was developed in the field N of the colliery and remained until the Site development in the late 80's.

In the early 1900's industrial development was noted to the SE of the branch line which continued until the late 50's with further branch lines and sidings added serving the industrial area.

The present day site is generally level with a gentle fall down to the NE and a substantial cut slope to the W boundary indicating that the Site platform was basically cut and filled.

Site records indicate the presence of a disused shaft to the S corner to the edge of the WWTW which coincides with the historic map shaft location to the 'New Flint Colliery'. This shaft was noted in Site records to have been capped with a concrete plug.

The review suggests that the Site had no contaminative uses prior to its development except the colliery spoil to the S corner (site of WWTW). The SE boundary contained former rail sidings (now Aber Road) and mixed industrial development, subsequent abandonment followed by more recent redevelopment.

6 Proposed Environmental Strategy.

6.1 Surface & Soil Contamination.

The above status reports suggest that the Delyn Mill site has a potentially low contaminative risk based upon current & historic usage.

However chemicals used in the processes potentially could be present either within existing structures or the surrounding ground due to failure of bunding / drainage systems.

An inventory of chemicals used in the process was created as part of the CDM procedures for the demolition contract and will be used to identify potentially contaminative elements and design a strategy for sampling & testing. A summary chemical inventory list is given in the Appendix to this report.

The inventory indicates that a range of potentially contaminative chemicals have been used in the processes; principally reagents such as hypochlorite, dyes, boiler conditioners and floculants. All were contained with bunded areas and tanks and were removed during decommissioning in the phase 1 stage.

Following phase 1 works the substructures to the paper mill will be cleaned & inspected and an investigation programme developed to identify potentially hazardous areas to tailor specific physical exploration.

To achieve this end, the existing sumps, pits and ducts within the Mill shall not be infilled with demolition arisings until such time that they have been inspected for condition and the potential risk of leakage.

The Phase 2 contractor is required to clear existing sumps, pits and ducts within the Mill of debris and detritus and prepare a Schedule of Inspections to suit the Phase 2 programme.

The inspections may result in further physical investigation (drilling, breaking out, coring etc) to obtain substrate & subsoil samples for chemical testing.

The result of the exploration will be used to guide spoil / soil handling in Phase 3 during the demolition process and any remediation requirements to hand over the finished site back to Kimberley Clark.

6.2 Hazardous Materials.

In addition, other hazardous materials may be present within the structure and plant & equipment.

A level 3 asbestos survey has been undertaken and is also included in the pre contract H&S file for CDM purposes.

Machine removal will be undertaken using specialist contractors who will undertake the necessary screening for hazardous materials likely to be encountered during the work.

6.3 Control of Dust & Noise.

The demolition of the superstructure will give rise to dust and noise with the potential to cause nuisance to Site Operations, Operative and off Site areas.

The contractor will be required to instigate noise & dust control measures during the works, such as damping down, suppression and selection of methods minimising generation and arisings.

The Site shall be kept clean during the works to reduce the risk of dust and dirt accumulation.

Noise monitoring shall be implemented by the Phase 2 contractor along the boundaries to the Site and records maintained for third party inspection should it be required. Noisy operations will be restricted to between 07.00 to 19.00 hrs Mon to Sat.

6.4 Waste Disposal.

All waste arisings from the demolition will be segregated in accord with disposal route.

6.4.1 Brick & Concrete

Retained on Site in temp stockpiles and used to infill old sumps, pits ducts etc.

6.4.2 Plastics

Taken to a PVC recycling station.

6.4.3 Timber

Taken to recycling station.

6.4.4 Florescent Tubes & Lamps (under WEEE regulations)

Sent for recycling classed as "hazardous waste" to a licensed recycling centre which can cater for mercury bearing wastes.

6.4.5 Oils

Are collected by and outside specialist sub-contractor for recycling.

6.4.6 Metals

Generally are taken to a recycling centre.

6.4.7 Rock Wool & Insulation

(Semi Hazardous Waste)

Is taken to a licensed landfill site.

6.5 Water Pollution.

The site is served by underground piped foul and surface water disposal systems. The latter routed via lakes within the Site before passing into an existing water course in the NE corner.

For this reason the consequences of pollution of the surface water drainage systems has a high potential environmental risk to the lakes and water course aquatic ecology.

The majority of potential chemical pollutants will have been removed in the phase 1 stage, thus the residual risk in phase 2 will be from re-suspension of embedded and surface contaminants during the work.

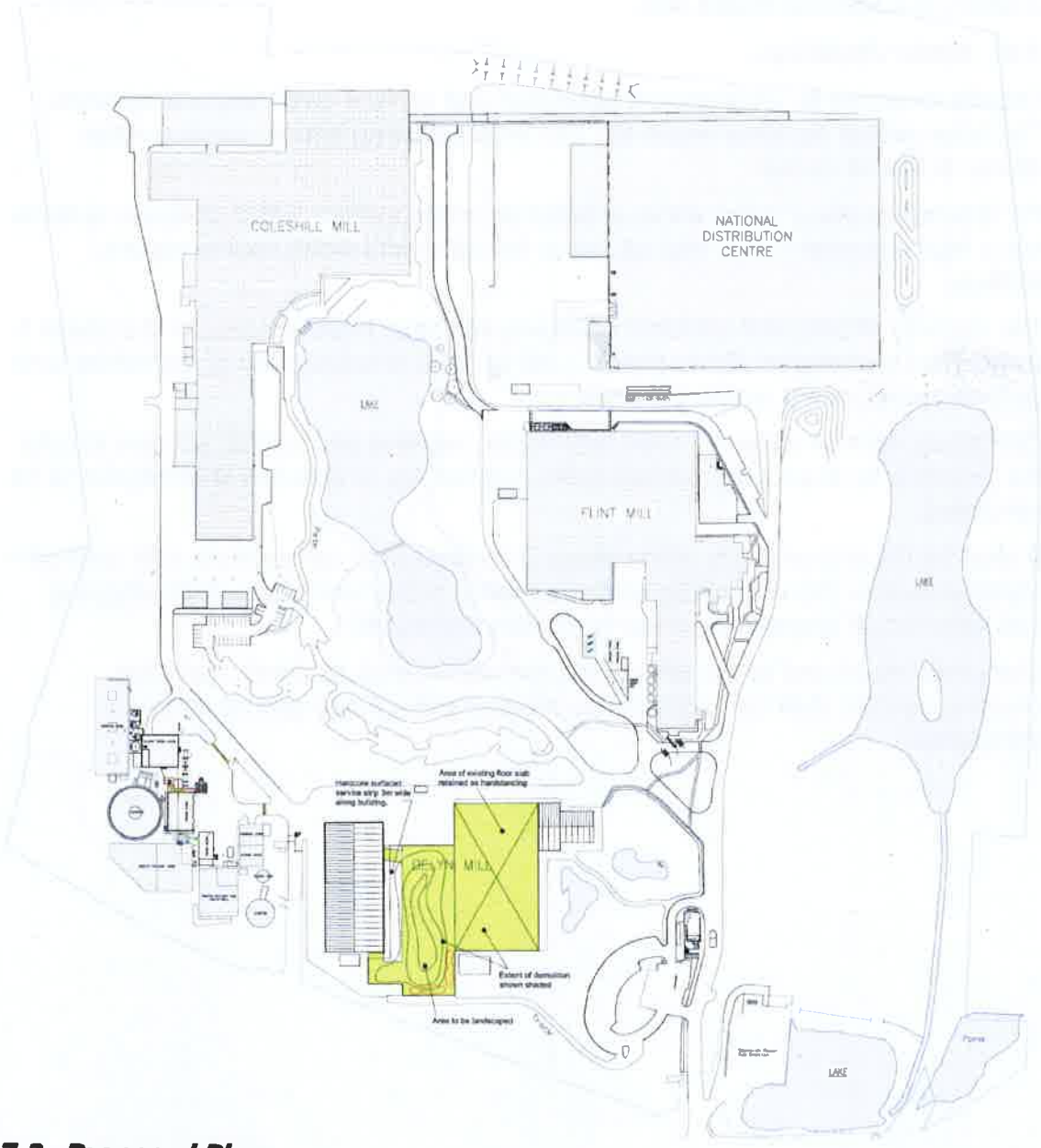
Operations such as damping down with water, washing and rainfall will give rise for the potential to re-suspend contaminants and the risk of pollution shall require to be controlled.

It shall be the responsibility of the phase 2 contractor to demonstrate with method statements how this risk will be controlled using settlement tanks, drain stopping and selection of appropriate areas for certain operations.

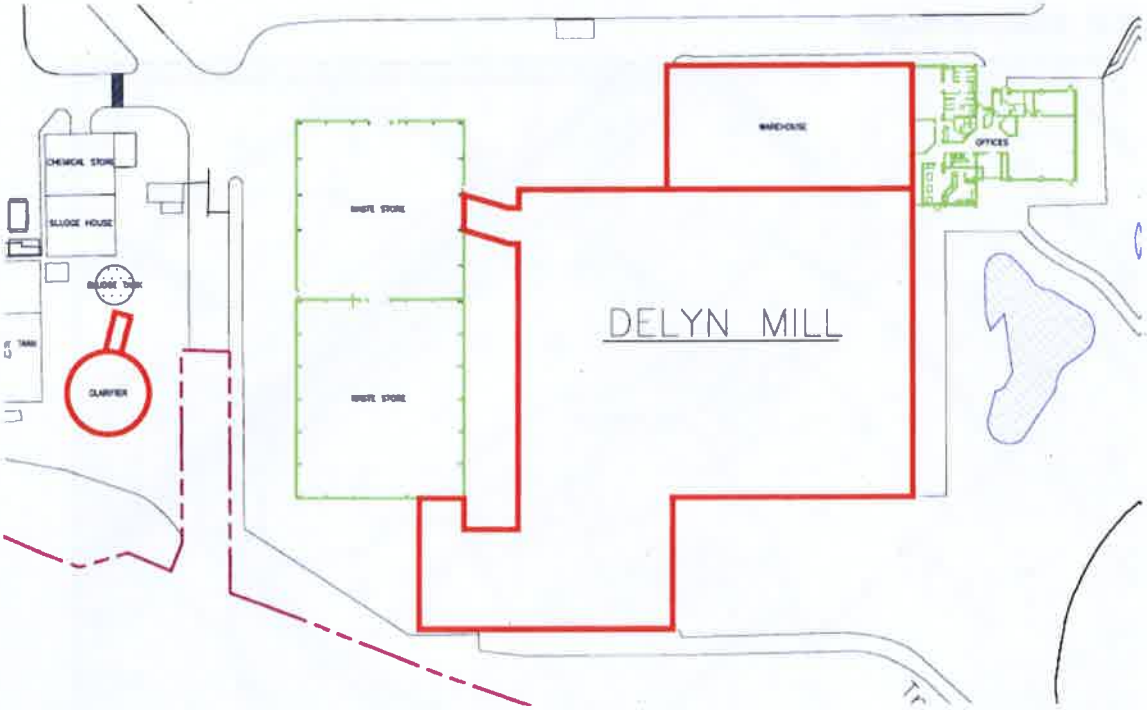
Chemicals introduced to the Site during the works (such as diesel, kerosene, cleaning agents) shall be appropriately bunded and spillage control measures introduced.

7 Appendix.

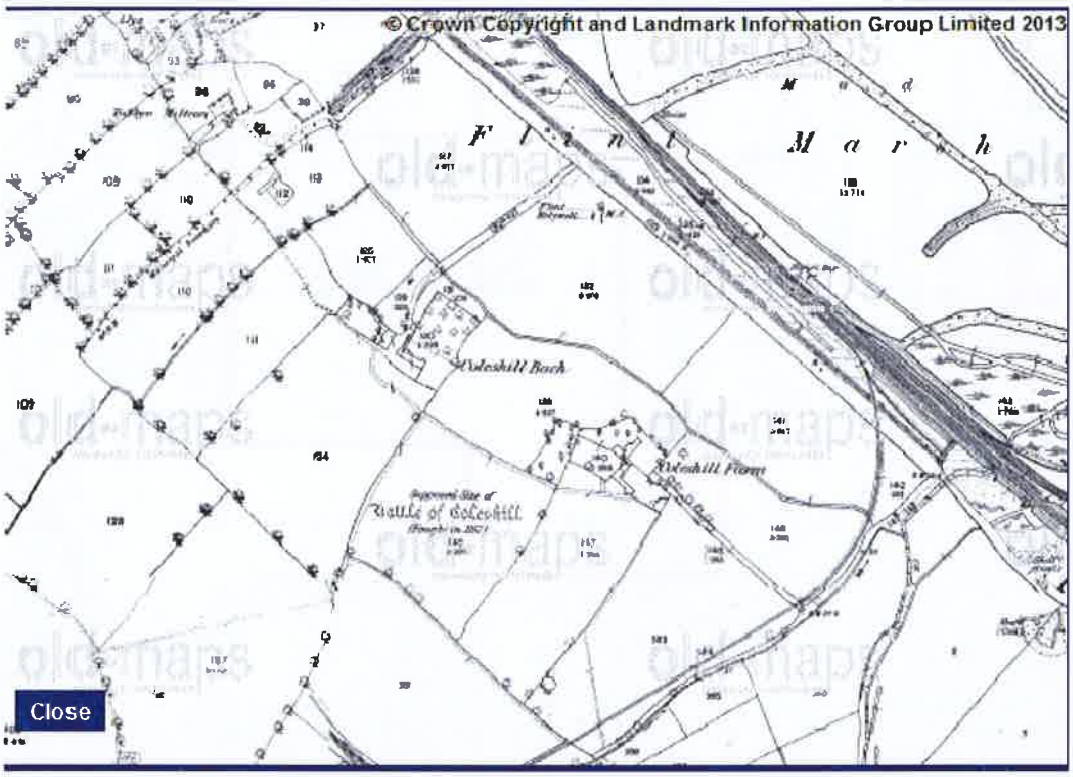
7.1 Location Plan.



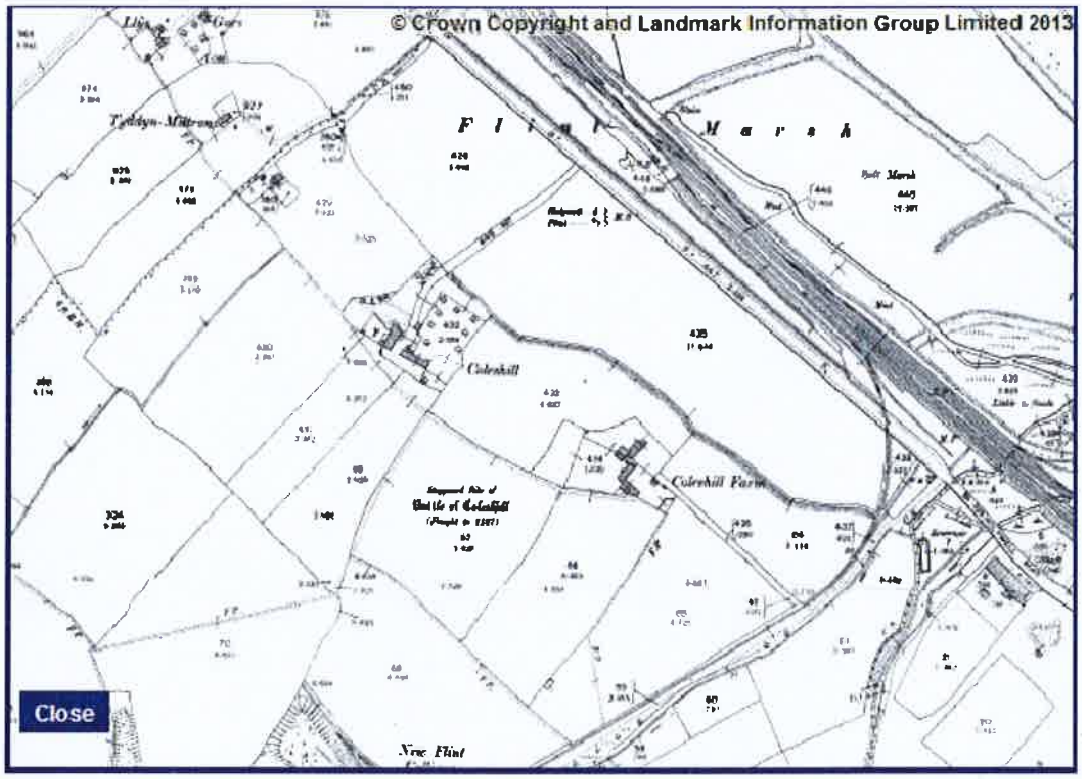
7.2 Proposed Plan.


CHEMICAL STORE
SLUDGE HOUSE
CLARIFIER
WASTE STORE
WASTE STORE
WAREHOUSE
OFFICES
DELYN MILL

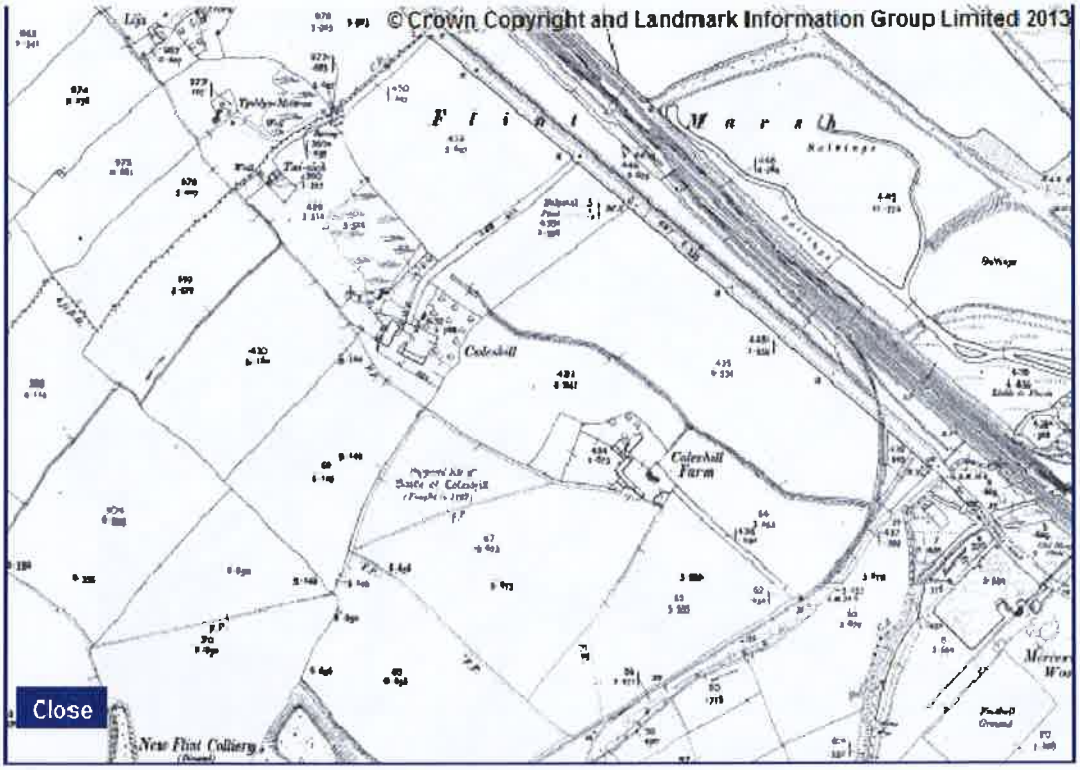
7.3 Historic Maps.



1870's.



1900.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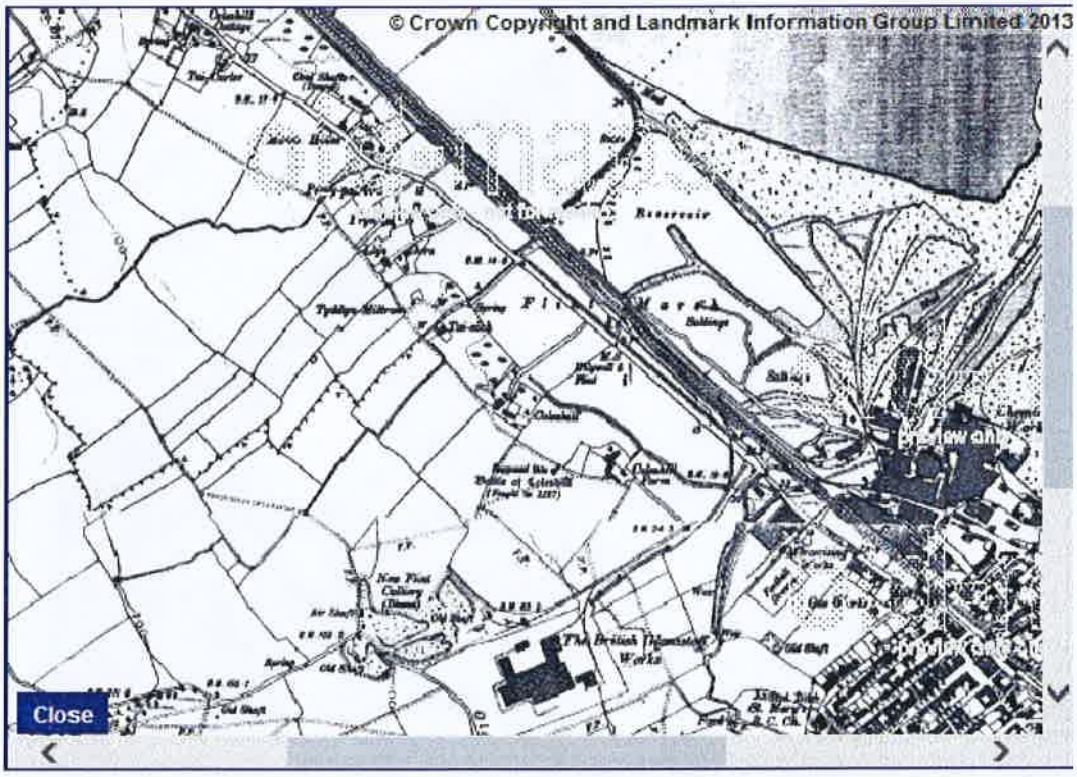
Close
New Flint Colliery

1912.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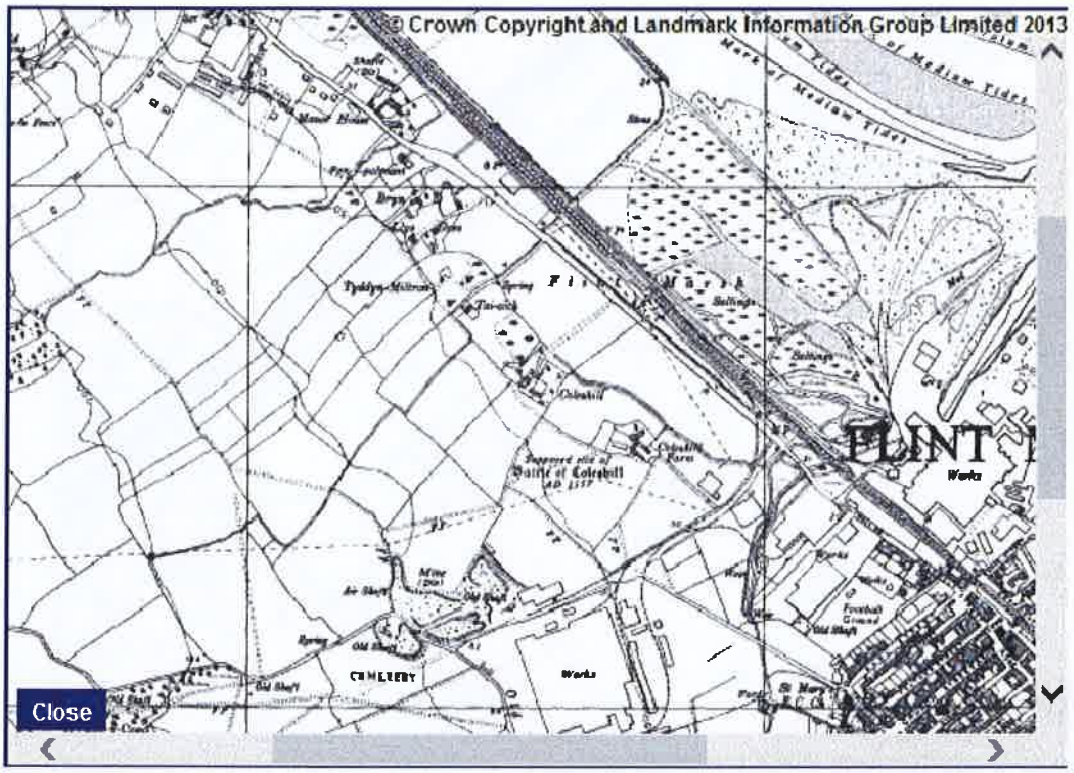
Close
Reservoir

1914.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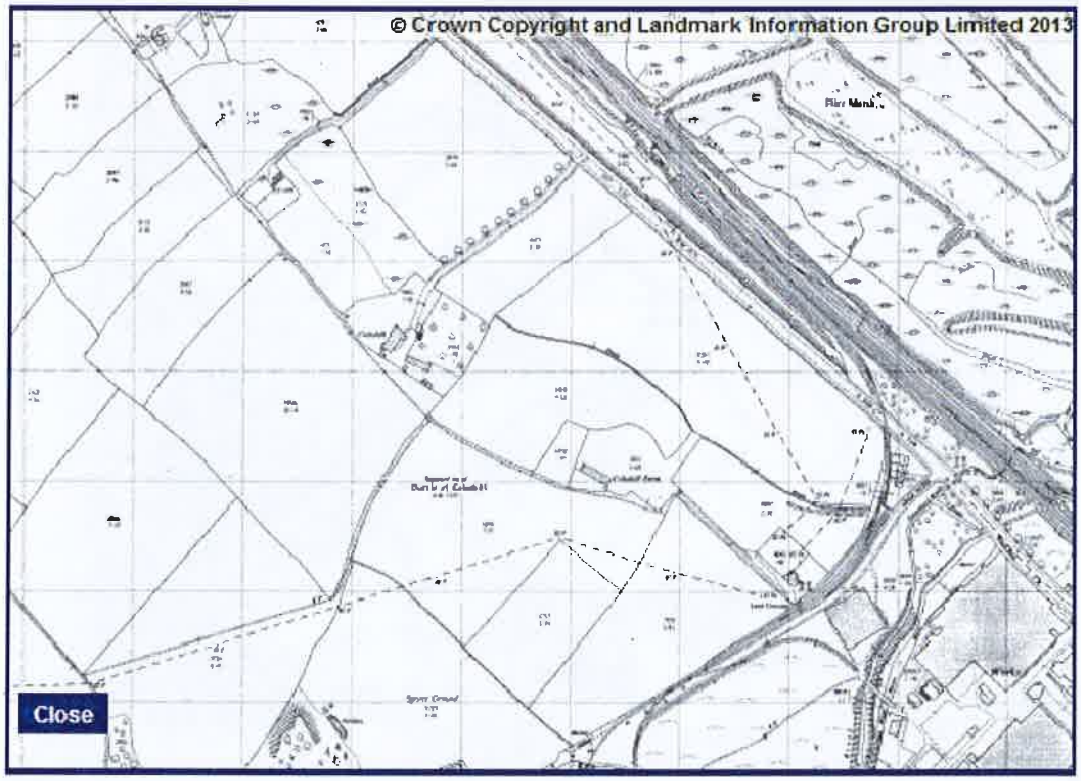
1950's.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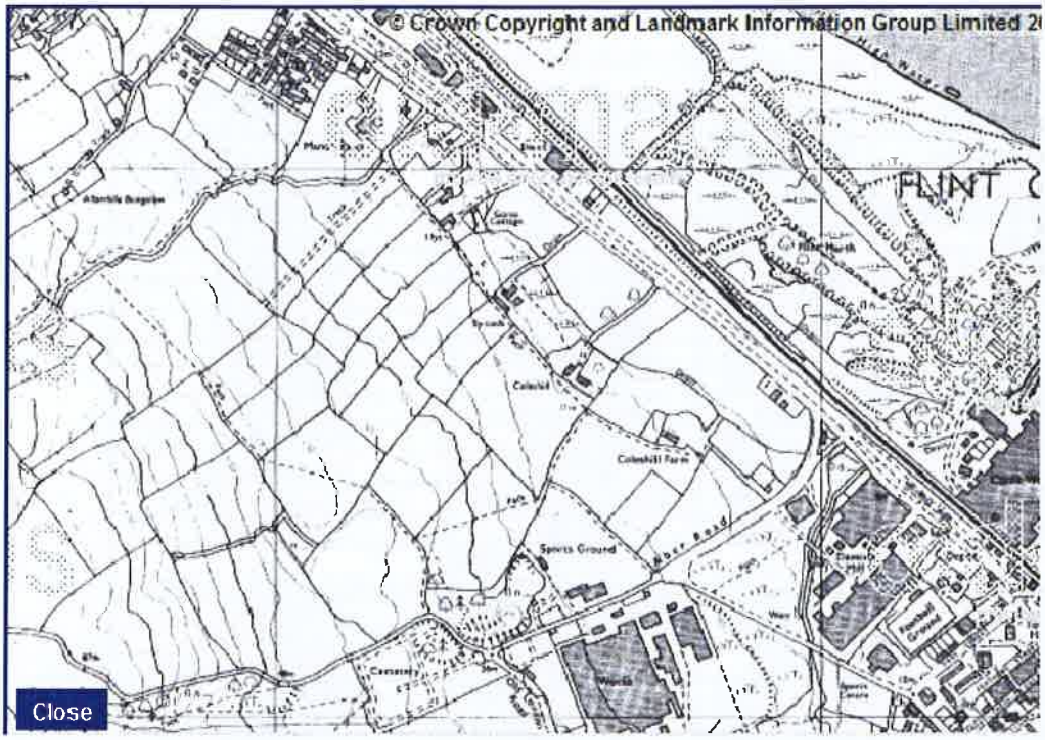
1963.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1982.

7.4 Process Chemical Inventory.

DESCRIPTION	MAX AMOUNT STORED	STORAGE CONTAINER	STORAGE LOCATION
Cartazine Green YK Dye	2000 LITRES	DAY TANK	DYE RIG BOILER HOUSE
Cartazine Blue BRK Dye	2000 LITRES	DAY TANK	DYE RIG BOILER HOUSE
Cartasol Blue KRL Dye	1200 LITRES	DAY TANK	DYE RIG BOILER HOUSE
Cartaspers PSM (0.3kg/tonne)	1200 LITRES	DAY TANK	BOILER HOUSE
Parafoam AC86	1200 LITRES	DAY TANK	BOILER HOUSE
Optisperse PQ 5176	400 LITRES	CHEMSURE TANK	BOILER HOUSE
Optisperse ADJ5150	400 LITRES	CHEMSURE TANK	BOILER HOUSE
Cortrol OS 5300	400 LITRES	CHEMSURE TANK	BOILER HOUSE
Steamate NA 4220	400 LITRES	CHEMSURE TANK	BOILER HOUSE
Continuum AT3223	100 LITRES	25 KG PALE	BOILER HOUSE
Spectrus OX1203	50 KG	23 KG BUCKET	BOILER HOUSE
Spectrus BD1500	100 LITRES	25 KG PALE	BOILER HOUSE
Renew SC7058,	1200 LITRES	DAY TANK	BOILER HOUSE
Renew SC7361	1000 LITRES	SEMI BULK CONTAINER	DELYN CHEMICAL STORE
Zenix FP7878E	1200 LITRES	DAY TANK	BOILER HOUSE
Sodium Hypochlorite (BULK)	12500 LITRES	10 000 LITRE BULK TANK & 2500 LITRE DAY TANK	STOCK PREP & DIESEL BUND AREA
Busperse 2454	2500 LITRES	2500 LITRE DAY TANK	STOCK PREP
Busperse 2422	1200 LITRES	DAY TANK	BOILER HOUSE
Fennopol A8680E	500 KG	BULK BAG	POLYMER CONTAINER
Fennofix 38	1500 LITRES	SEMI BULK CONTAINER	POLYMER CONTAINER
Busperse 59LO	1200 LITRES	DAY TANK	BOILER HOUSE
Bubond 5033	1200 LITRES	DAY TANK	BOILER HOUSE
Busperse 2139	1200 LITRES	DAY TANK	BOILER HOUSE
Silox Hydropac (Hydros)	540 KG	FLAMMABLE CUPBOARD	MEZZ FLOOR CAGE
Eka Soft B15	1200 LITRES	DAY TANK	YANKEE COATING BUND
Eka Soft M84	1200 LITRES	DAY TANK	YANKEE COATING BUND
Eka Soft R95	1200 LITRES	DAY TANK	YANKEE COATING BUND
EKA WS505	48 000 LITRES	BULK TANK	KYMENE TANK IN WASTE YARD

Schedule 6 - Notification

These pages outline the information that the operator must provide.

Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

If any information is considered commercially confidential, it should be separated from non-confidential information, supplied on a separate sheet and accompanied by an application for commercial confidentiality under the provisions of the PPC Regulations.

Part A

Permit Number	**EPR/BJ9703IM**
Name of operator	**Kimberly-Clark Limited**
Location of Installation	**Flint Paper Mill, Aber Road, Flint, Flintshire, CH6 5EX**
Time and date of the detection	**25th October at 16:10**

(a) Notification requirements for any malfunction, breakdown or failure of equipment or techniques, accident, or fugitive emission which has caused, is causing or may cause significant pollution	
To be notified within 24 hours of detection	
Date and time of the event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances(s) potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken, or intended to be taken, to stop any emission	
Description of the failure or accident.	

(b) Notification requirements for the breach of a limit	
To be notified within 24 hours of detection unless otherwise specified below	
Emission point reference/ source	**W2**
Parameter(s)	**Ammonia**
Limit	**8mg/l**
Measured value and uncertainty	**9.88mg/l**
Date and time of monitoring	**Samples from tidal discharge (auto sampler) 25th October at 16:10**
Measures taken, or intended to be taken, to stop the emission	**The following discharge was in consent.**

Time periods for notification following detection of a breach of a limit	
Parameter	**Notification period**
Ammonia	Without delay

(c) Notification requirements for the detection of any significant adverse environmental effect	
To be notified within 24 hours of detection	
Description of where the effect on the environment was detected	
Substances(s) detected	
Concentrations of substances detected	
Date of monitoring/sampling	

Part B - to be submitted as soon as practicable

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission	
The dates of any unauthorised emissions from the installation in the preceding 24 months.	**25/11/11, 7/12/11, 20/12, 21/12, 1/2/12, 12/2/12, 13/2/12, 27/6/12, 3/7/12 13/8/12, 19/8/12, 23/9/12, 19/11/12, 27/11/12, 7/2/13, 8/2/12, 4/3/13, 2/4/13, 27/5/13, 11/6/13,22/6/13, 5/7/13**

Name*	Andrew Linkman
Post	Safety and Environmental Coordinator
Signature	
Date	29/10/13

* authorised to sign on behalf of Kimberley Clark